

## **TITLE: CD STORAGE BOX**

### **BACKGROUND OF THE INVENTION**

#### **1. Field of the invention**

The present invention is related to a CD storage box, and  
5 especially to a CD storage box in which a stacking structure  
allows partial CD's to stack, thus the capacity for CD's can be  
increased.

#### **2. Description of the Prior Art**

CD's including CD's and VCD's generally are provided on  
10 the surfaces thereof with a data signal layer, to prevent the  
surfaces thereof from scrapping, such CD's generally are stored  
in a bag or a box. The advantage of using a storage box is that,  
CD's basically are positioned in a mode of separating from one  
another, the CD's in the box will not be scrapped frictionally  
15 even when they are shaken or carried on one' person.

Conventionally, a CD storage box is composed of a lid and a  
bottom receiver in opposition to the lid; the lid and the bottom  
receiver can be closed to each other or can be separated from  
each other to reveal the CD's therein. In order to increase the  
20 receiving capacity of such a CD storage box, the lid and the  
bottom receiver generally are provided therein with receiving  
spaces of the sizes in corresponding to that of CD's to form a CD  
storage box of two CD's. Each receiving space has a central

positioning post for slipping thereover a central hole of CD's; the CD's are fittingly positioned in the receiving space.

With the above structure, the CD storage box formed from the lid and the bottom receiver can receive therein two CD's in a mode of being stable and being not subjected to shaking and abrading. However, a box of quite a large volume only receives therein two CD's seems non-effective in capability, and thereby improvement is necessary.

### **SUMMARY OF THE INVENTION**

10 The main object of the present invention is to provide a CD storage box; the body of the box can have larger CD receiving capacity therein.

To obtain the object, the box of the present invention integrally formed is provided with a plurality of mutually neighboring recesses in a recessed surface thereof, which  
15 recesses have their heights lowered from the first one gradually to the last one. Each recess has an annular chamber in corresponding by size to the diameter of a CD; the annular chambers each has a bottom surface with a predetermined radial  
20 width and an inner wall perpendicular to the bottom surface, and each is provided with a CD positioning means; each recess has a height different from those of its neighboring ones, part of their peripheries are mutually overlapped with a neighboring one as if

the peripheries have notches.

The present invention will be apparent in its novelty and features after reading the detailed description of the preferred embodiment thereof in reference to the accompanying drawings.

5    **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is a perspective view of a preferred embodiment of the present invention;

Fig. 2 is a top view taken from Fig. 1;

Fig. 3 is a sectional view taken from Fig. 2;

10    Fig. 4 is a sectional schematic view like Fig. 2 showing inserting a CD;

Fig. 5 is a sectional schematic view like Fig. 3 showing inserting a CD;

15    Fig. 6 is a schematic view of the present invention showing taking out a CD.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

Referring to Figs. 1-3, in the preferred embodiment shown, the present invention has an integrally formed (such as by vacuum forming) box 100, the box 100 is provided with a plurality of mutually neighboring recesses in a recessed surface 101 thereof, which recesses have their heights lowered from the first one gradually to the last one. In the preferred embodiment shown, there are at least an outermost first recess 10, a middle

second recess 20 and an innermost third recess 30.

The first recess 10 in the embodiment shown is an incomplete annular chamber, one side of the first recess 10 except those with a curve in corresponding with the size of a CD (i.e., the side at the left of the embodiment) and one neighboring side of the second recess 20 are mutually overlapped, this overlapping area is formed as a notch. The first recess 10 is composed of a bottom surface 11 with a predetermined radial width and an inner wall 12 perpendicular to the bottom surface 11, and is provided with a CD positioning means. In the preferred embodiment, the positioning means includes a slightly raised arciform portion 13 at the junction of the bottom surface 11 and the inner wall 12 as well as a plurality of protruding strips 14 provided slightly higher than the raised arciform portion 13. In the preferred embodiment shown, the inner wall 12 is provided with two sets of protruding strips 14 mutually opposite and separated; thereby the raised arciform portion 13 and the protruding strips 14 can form therebetween a positioning means in corresponding by size to the diameter of a CD. And for the convenience of moving and taking a CD stored in the first recess 10, the outer side (i.e., the right side shown) of the first recess 10 is preferably provided on the periphery thereof with notches 35 for access of fingers to move the CD.

One peripheral side of the second recess 20 which is lower than the first recess 10 is partially stacked beneath the latter, the second recess 20 similarly is an annular chamber in corresponding by size to the diameter of a CD. In the preferred embodiment shown, the right side of the second recess 20 is partially stacked beneath the first recess 10. The second recess 20 similarly is composed of a bottom surface 21 with a predetermined radial width and an inner wall 22 perpendicular to the bottom surface 21, and is similarly provided with a CD positioning means including a slightly raised arciform portion 23 at the junction of the bottom surface 21 and the inner wall 22 as well as a plurality of protruding strips 24 provided slightly higher than the raised arciform portion 23. The other side of the second recess 20 (namely the left side shown) partially overlaps the neighboring third recess 30, so that both the left and right sides of the second recess 20 are formed notches.

The third recess 30 is more lower than a neighboring right side of the second recess 20 and is stacked beneath the latter to form an area as a notch; an annular chamber formed from it similarly is composed of a bottom surface 31 with a predetermined radial width and an inner wall 32 perpendicular to the bottom surface 31, and is similarly provided with a CD positioning means including a slightly raised arciform portion 33

at the junction of the bottom surface 31 and the inner wall 32 as well as a plurality of protruding strips 34 provided slightly higher than the raised arciform portion 33.

As shown in Figs. 4 and 5, the outermost first recess 10, the middle second recess 20 and the innermost third recess 30 can thereby be placed therein respectively with CD's 91, 92 and 93. The CD's 91, 92 and 93 are firmly positioned by partially engaging on the means formed from the raised arciform portions 13, 23, 33 and the protruding strips 14, 24 and 34. When it is desired to take out the stored CD's 91, 92 and 93, as shown in Fig. 6, a thumb in cooperation with some other finger of a hand 90 can pick the CD's 91, 92 and 93 out from one side.

The above stated structure of the present invention can be used to more firmly position more CD's under the condition of being given with a CD storage box having an identical volume to a conventional box; this can breakthrough the limited capacity of a conventional CD storage box with CD's parallelly disposed therein. Having thus described my invention having high industrial value, what I claim as new and desire to be secured by Letters Patent of the United States are:

The preferred embodiments cited above are only for illustrating, and not for giving any limitation to the scope of the present invention. It will be apparent to those skilled in this art

that various modifications or changes made to the present invention without departing from the spirit shall fall within the scope of the appended claims.

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